

REMARKS:

Claims 2-3, 5-8, 10-12, and 14-24 are pending. By this Amendment, claims 6, 8, 15-17, and 20-22 are amended, claims 7, 18, and 19 are cancelled and claims 25 and 26 are added, thereby leaving claims 2, 3, 5, 10-12, 14, 23, and 24 unchanged.

37 CFR 1.84(p)(4), Drawing Objections

Examiner objected to the drawings containing the reference character “16” (Figures 1-2) because this reference character refers to both a “brake rotor” and a “brake component.” Applicants hereby amend the specification to overcome this objection. Particularly, the specification is hereby amended to identify only the brake rotor with the reference number 16. Accordingly, withdrawal of this objection is respectfully requested.

35 U.S.C. §112, Second Paragraph, Rejection

Claim 6 is rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. More particularly, the Examiner indicates that the claim 6 recitation of “. . . when mounted to a brake component to receive the brake component there between” is confusing as it is unclear what Applicant is referring to and it is unclear as to which one of the structures is mounted to the brake component.

By this Amendment, Applicants have amended claim 6 in an attempt to clarify the Examiner’s confusion. Accordingly, withdrawal of this rejection is respectfully requested.

35 U.S.C. §102(b) Rejections

Claims 2-3, 5, 7-8, and 20 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 2,095,054 (“Burger”).

In order “to anticipate a claim, the reference must teach each and every element of the claim.” MPEP 2131. “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Currently amended independent claim 8 recites:

A wheel hub for a vehicle having an axle and a wheel, the hub comprising:
a sleeve rotatably mounted on the axle, the sleeve having an outer surface
and a sleeve bolting flange radially extending from the outer surface;

a first wheel-mounting flange removably mountable to the sleeve and
substantially surrounding the sleeve when mounted to the sleeve, the first wheel-
mounting flange having a first set of mounting holes for bolting the first wheel-
mounting flange to the sleeve bolting flange and a second set of mounting holes
for bolting a wheel to the first wheel-mounting flange, the second set of mounting
holes having a first configuration and being radially more distant from the sleeve
than the first set of mounting holes;

a second wheel-mounting flange removably mountable to the sleeve and
substantially surrounding the sleeve when mounted to the sleeve, the first and
second wheel mounting flanges being interchangeably mounted to the sleeve, the
second wheel mounting flange having a first set of mounting holes for bolting the
second wheel-mounting flange to the sleeve bolting flange and a second set of
mounting holes for bolting a wheel to the second wheel-mounting flange, the
second set of mounting holes having a second configuration different than the first
configuration and being radially more distant from the sleeve than the first set of
mounting holes; and

wherein the sleeve includes a radially extending bolting lug and the first
and second wheel-mounting flanges each include an inner edge defining a cavity
large enough to receive the bolting lug.

Burger does not teach or suggest, inter alia, a first wheel-mounting flange and a second wheel-mounting flange interchangeably mounted to the sleeve. Rather, Burger discloses only a single wheel body 30 mountable to wheel hub shell 15. Burger does disclose alternate embodiments of the wheel hub shell in Figs. 6 and 11, however, in both instances, Burger still discloses only a single wheel body 110, 170 (respectively) connected to the wheel hub shells.

In addition, Burger does not teach or suggest first and second wheel-mounting flanges that each have a set of mounting holes for mounting a wheel to the first and second wheel-mounting flanges, wherein each set of mounting holes having a different configuration. Instead, Burger discloses only a single wheel body with a single hole configuration.

Further, Burger does not disclose a bolting lug. The Examiner attempts to rely on flange 32 as a bolting lug. However, flange 32 is not a bolting lug.

For these and other reasons, Burger does not teach or suggest the subject matter of independent claim 8. In addition, none of the other references of record teach or suggest the subject matter of independent claim 8. Accordingly, independent claim 8 is allowable. Claims

2, 3, 5, 6, 16, and 17 depend from independent claim 8 and are allowable for the same and other reasons as independent claim 8.

Currently amended independent claim 20 recites:

A wheel hub comprising:
a sleeve mounted on an axle, the sleeve including an outer surface and a projection extending outwardly from the outer surface, the projection including an outboard-most surface; and
a wheel-mounting flange substantially surrounding the sleeve and including an inner edge with a cavity large enough to receive the projection, pass over the projection, and completely pass by the outboard-most surface of the projection in a particular rotational position.

Burger does not teach or suggest, inter alia, a wheel-mounting flange including an inner edge with a cavity large enough to receive a projection, pass over the projection, and completely pass by an outboard-most surface of the projection in a particular rotational position. The Examiner attempts to rely on flange 32 as the projection. As seen clearly in Figs. 1 and 11 of Burger, the wheel bodies 30 and 170 have inwardly projecting flanges 65 that are clearly on the outboard side of the flange 32, thereby preventing the wheel bodies 30 and 170 from passing over and completely passing by an outboard-most surface of the flange 32.

For these and other reasons, Burger does not teach or suggest the subject matter of independent claim 20. In addition, none of the other references of record teach or suggest the subject matter of independent claim 20. Accordingly, independent claim 20 is allowable. Claims 21-24 depend from independent claim 20 and are allowable for the same and other reasons as independent claim 20.

35 U.S.C. §103(a) Rejections

Claims 16-17 and 21-24 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Burger in view of U.S. Patent No. 6,880,682 (“Gotti”). Claims 6, 10-12, 14, and 15 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Burger in view of U.S. Patent No. 6,076,896 (“Bertetti et al.”). Claims 18 and 19 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Burger in view of Bertetti et al. and further in view of Gotti.

The rejections of claims 18 and 19 are moot in view of the cancellation thereof. The rejections of dependent claims 6, 10-12, 14, 16, 17, and 21-24 will not be addressed herein since

these claims respectively depend from one of independent claims 8, 15, or 20 and these independent claims are herein differentiated over the references of record. Accordingly, dependent claims 6, 10-12, 14, 16, 17, and 21-24 are allowable for the same and other reasons as the independent claim from which they respectfully depend.

Currently amended independent claim 15 recites:

A wheel-mounting assembly for a vehicle having an axle and a wheel, the assembly comprising:

a sleeve rotatably mounted on the axle and having an outer surface, the sleeve including a sleeve bolting flange radially extending from the outer surface and a plurality of bolting lugs extending outwardly from the outer surface;

a wheel-mounting flange substantially surrounding the sleeve and removable from the sleeve, the wheel-mounting flange including an inner edge defining a plurality of flange cavities configured to receive the plurality of bolting lugs and pass over the plurality of bolting lugs at a plurality of particular rotational positions; and

a brake component positioned in part between the sleeve bolting flange and the wheel-mounting flange, the brake component including an inner edge defining a plurality of brake cavities configured to receive the plurality of bolting lugs and pass over the plurality of bolting lugs at a plurality of particular rotational positions.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. In re Vaeck, 947 F.2d 488, 493, 20 U.S.P.Q. 2d 1438, 1442 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. Id. Finally, the prior art reference (or references when combined) must teach or suggest all of the claim limitations. In re Royka, 490 F.2d 981, 985, 180 U.S.P.Q. 580, 583 (CCPA 1974); MPEP §§ 706.02(j), 2143.03. With regards to independent claim 15, the third criteria will be addressed herein.

Burger does not teach or suggest, *inter alia*, a plurality of bolting lugs extending outwardly from an outer surface of a sleeve. The Examiner attempts to rely on the flange 32 of Burger as a bolting lug. Firstly, the flange 32 is not a bolting lug. Secondly, the flange 32 is only a single, continuous flange that extends around the wheel hub 15 (see Fig. 4). Accordingly, Burger does not disclose a plurality of bolting lugs. In addition, on page 6 of the Office Action

mailed June 8, 2006, the Examiner concedes that Burger does not teach a plurality of bolting lugs extending from an outer surface of a sleeve.

Also, Burger does not teach or suggest a wheel-mounting flange including an inner edge defining a plurality of flange cavities configured to receive a plurality of bolting lugs and pass over the plurality of bolting lugs at a plurality of particular positions. Rather, Burger discloses a single cavity for receiving the single flange 32 in any position. Accordingly, Burger does not teach or suggest a plurality of cavities or a plurality of bolting lugs. In addition, on page 6 of the Office Action mailed June 8, 2006, the Examiner concedes that Burger does not teach a wheel-mounting flange including a plurality of cavities for receiving a plurality of bolting lugs.

Further, and as conceded by the Examiner on page 5, paragraph 9 (Applicants assume that the Examiner mistakenly identifies Bertetti as the first reference instead of Burger), Burger does not teach or suggest a brake component positioned in part between a sleeve bolting flange and a wheel-mounting flange.

Further yet, Burger does not teach or suggest a brake component including an inner edge defining a plurality of brake cavities configured to receive a plurality of bolting lugs and pass over the plurality of bolting lugs at a plurality of particular positions. Rather, Burger discloses a brake drum 25 integral with the wheel hub 30. The brake drum 25 of Burger does not have any cavities and actually teaches away from including cavities. The basis for this teaching away is derived from the fact that Burger teaches the brake drum 25 as being integral with the wheel hub 30 and Burger recites benefits that result from this integral connection. To interpret Burger in a manner other than that which is disclosed (i.e., integral brake drum and wheel hub) would be in direct conflict with the nature of the teachings (i.e., the benefits derived from integral brake drum 25 and wheel hub 30). Therefore, Burger teaches away from the subject matter of independent claim 15.

For these and other reasons, Burger does not teach or suggest the subject matter of independent claim 15.

Bertetti et al. does not cure the deficiencies of Burger. Bertetti et al. does not teach or suggest, *inter alia*, a plurality of bolting lugs extending outwardly from an outer surface of a sleeve. In addition, on page 6 of the Office Action mailed June 8, 2006, the Examiner concedes that Bertetti et al. does not teach a plurality of bolting lugs extending from an outer surface of a sleeve.

In addition, Bertetti et al. does not teach or suggest a wheel-mounting flange including an inner edge defining a plurality of flange cavities configured to receive a plurality of bolting lugs and pass over the plurality of bolting lugs at a plurality of particular positions. On page 6 of the Office Action mailed June 8, 2006, the Examiner concedes that Bertetti et al. does not teach wheel-mounting flange including a plurality of cavities for receiving a plurality of bolting lugs.

Further, Bertetti et al. does not teach or suggest a brake component including an inner edge defining a plurality of brake cavities configured to receive a plurality of bolting lugs and pass over the plurality of bolting lugs at a plurality of particular positions.

For these and other reasons, Bertetti et al. does not teach or suggest the subject matter of independent claim 15.

The Examiner does not rely on Gotti to reject independent claim 15. However, the Examiner does use Gotti to reject dependent claims 18 and 19, which, prior to cancellation, generally included subject matter relating to the sleeve including a plurality of bolting lugs, and the wheel-mounting flange and the brake component including a plurality of cavities large enough to receive the plurality of bolting lugs and pass over the plurality of bolting lugs in a plurality of particular rotational positions. Currently amended independent claim 15 recites a sleeve including a plurality of bolting lugs extending outwardly from an outer surface of the sleeve, a wheel-mounting flange including an inner edge defining a plurality of flange cavities configured to receive the plurality of bolting lugs and pass over the plurality of bolting lugs at a plurality of particular rotational positions, and a brake component including an inner edge defining a plurality of brake cavities configured to receive the plurality of bolting lugs and pass over the plurality of bolting lugs at a plurality of particular rotational positions. Accordingly, Applicants will distinguish independent claim 15 over Gotti.

Gotti does not cure the deficiencies of either Burger or Bertetti et al. Gotti does not teach or suggest, inter alia, a sleeve including a plurality of bolting lugs extending outwardly from an outer surface of the sleeve. Rather, Gotti discloses a bearing 3 with no bolting lugs. The Examiner merely cites Figs. 3-5 as disclosing a plurality of bolting lugs as claimed in independent claim 15 and provides no further support for how Figs. 3-5 specifically relate to independent claim 15. After review of Figs. 3-5, it is clear that the bearing 3 has no bolting lugs, while the body 2 has a set of teeth 26. Applicant assumes that the Examiner is relying on the teeth 26 to satisfy the plurality of bolting lugs cited in independent claim 15. Unfortunately for the Examiner's contention, the body 2 is not a sleeve as recited in independent claim 15.

Independent claim 15 recites that the sleeve is rotatably mounted on an axle. In Gotti, the bearing 3 is rotatably mounted on an axle. Accordingly, if one was going to interpret Gotti to include a sleeve as recited in independent claim 15, the bearing 3 would be the sleeve and not the body 2. With this in mind, independent claim 15 also recites a wheel-mounting flange that substantially surrounds the sleeve and is removable from the sleeve. In Gotti, the body 2 is surrounding the bearing 3 and is removable therefrom. Accordingly, if one was going to interpret Gotti to include a wheel-mounting flange as recited in independent claim 15, the body 2 would be the wheel-mounting flange. Therefore, the teeth 26 are positioned on the body 2 (i.e., a wheel-mounting flange) rather than on the bearing 3 (i.e., a sleeve), which is contrary to the bolting lugs extending from the sleeve as recited in independent claim 15.

Also, the Examiner contends that “the general concept of providing a plurality of bolting lugs extending from the outer surface of the sleeve which receive a plurality of cavities of the wheel-mounting flange in the shell and the flange of a wheel hub falls within the realm of common knowledge as obvious duplication of parts and is well known in the art as illustrated by Gotti.” Firstly, Applicants respectfully submit that this contention is made with no evidentiary support. Citing the sole disclosure of Gotti as sufficient evidence to show that a claim limitation is within the realm of common knowledge as obvious is clearly improper. Plus, this sole reference of Gotti has been shown to lack the concept at issue. Accordingly, one may ask himself how a reference that does not disclose the concept at issue would show that the concept at issue is within the realm of common knowledge? The answer is, the reference cannot. In fact, the concept at issue (i.e., a plurality of bolting lugs extending from an outer surface of a sleeve) is not shown in any of the cited references.

Further, Applicant respectfully submits that deficiencies of references cannot be saved by appeals to “common sense” and “basic knowledge” without any evidentiary support. In re Zurko, 258 F.3d 1379 (Fed. Cir. 2001).

Nevertheless, Gotti still does not disclose the subject matter of independent claim 15, particularly relating to the plurality of bolting lugs extending from an outer surface of a sleeve.

In addition, Gotti does not teach or suggest a wheel-mounting flange including an inner edge defining a plurality of flange cavities configured to receive a plurality of bolting lugs and pass over the plurality of bolting lugs at a plurality of particular rotational positions. Rather, and with reference to Fig. 4, Gotti discloses a body 2 with a single inner edge and a single cavity for receiving the bearing 3.

For these and other reasons, Burger, Bertetti et al., and Gotti do not teach or suggest the subject matter of independent claim 15 and therefore do not establish a prima facie case of obviousness for independent claim 15. Accordingly, independent claim 15 is allowable. Claims 10-12, 14, 25, and 26 depend from independent claim 15 and are allowable for the same and other reasons as independent claim 15.

CONCLUSION:

In view of the foregoing, entry of the present Amendment and allowance of claims 2, 3, 5, 6, 8, 10-12, 14-17, and 20-26 are respectfully requested.

The undersigned is available for telephone consultation during normal business hours.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Paul M. McGinley', with a large, sweeping flourish extending to the right.

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